

# PENNSYLVANIA

## Science and Engineering Profile

	Penn.	U.S.	Rank		Penn.	U.S.	Rank
Doctoral scientists, 1993	20,012	430,332	4	Total R&D performance, 1993 (millions)	\$8,278	\$161,427	6
Doctoral engineers, 1993	3,886	81,293	6	Industry R&D, 1993 (millions)	\$6,711	\$117,622	6
S&E doctorates awarded, 1993	1,290	25,409	6	Academic R&D, 1993 (millions)	\$1,019	\$19,489	6
of which, in engineering	29%	22%		of which, in life sciences	54%	55%	
in life sciences	19%	24%		in engineering	20%	16%	
in social sciences	16%	15%		in math & computer sciences	7%	4%	
S&E postdoctorates, 1993				Higher education current-fund			
in doctorate-granting institutions	1,807	34,394	5	expenditures, 1993 (millions)	\$9,672	\$163,994	3
S&E graduate students, 1993				Number of SBIR awards, 1990-93	468	13,995	7
in doctorate-granting institutions	19,873	438,128	7	Patents issued to state residents, 1994	2,816	56,039	7
Population, 1994 (000s)	12,052	260,341	5	Gross state product, 1992 (billions)	\$267.0	\$5,994.1	6
Civilian labor force, 1994 (000s)	5,829	131,013	6	of which, agriculture	1%	2%	
Personal income per capita, 1994	\$22,324	\$21,809	19	manufacturing, mining, construction	24%	23%	
Federal spending				transportation, communication, utilities	9%	9%	
Total expenditures 1994 (millions)	\$61,025	\$1,284,896	5	wholesale and retail trade	15%	16%	
R&D obligations 1993 (millions)	\$2,567	\$65,394	7	finance, insurance, real estate	19%	18%	
				services	21%	20%	
				government	10%	12%	

Rankings and totals are based on data for the 50 States and D.C.

## Federal Obligations for Research and Development in Pennsylvania by Agency and Performer: Fiscal Year 1993

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
<b>Total, all agencies</b>	2,566,507	353,951	21,636	1,319,823	706,699	158,950	5,448	7
<b>Department of Agriculture</b>	40,381	27,871	0	0	12,447	25	38	8
<b>Department of Commerce</b>	2,484	231	200	1,766	227	60	0	29
<b>Department of Defense</b>	1,483,256	232,616	21,436	1,047,572	142,091	39,541	0	7
<b>Department of Energy</b>	345,274	62,389	0	243,182	24,119	15,584	0	5
<b>Dept. of Health &amp; Human Services</b>	508,008	1,160	0	3,872	404,298	97,680	998	5
<b>Department of the Interior</b>	39,782	29,234	0	7,239	3,154	0	155	4
<b>Department of Transportation</b>	11,523	450	0	4,261	2,435	400	3,977	10
<b>Environmental Protection Agency</b>	3,090	0	0	226	2,584	0	280	22
<b>Nat'l Aeronautics &amp; Space Admin.</b>	30,011	0	0	9,855	19,654	502	0	19
<b>National Science Foundation</b>	102,698	0	0	1,850	95,690	5,158	0	4
<b>State rank</b>	7	12	17	7	3	6	12	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.